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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,683	09/18/2001	Kimiyoshi Kitazawa	0038-0363P	8538
2292	7590	02/03/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ZACHARIA, RAMSEY E	
			ART UNIT	PAPER NUMBER
			1773	15
DATE MAILED: 02/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

A-2-15

# Office Action Summary

Application No.

09/869,683

Applicant(s)

KITAZAWA ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because there appears to be Japanese writing in Figure 9. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The abstract of the disclosure is objected to because it is more than one paragraph in length. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 1-4 are rendered indefinite because it is unclear how the water content is measured - weight percent, volume percent, etc.

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6. Claim 2 is rendered indefinite because it recites a water content of 5% or more, which encompasses water contents greater than the 12% required by independent claim 1. This rejection may be overcome by replacing the phrase "5% or more" with the phrase --5 to 12%--.

7. Regarding claims 5-11, the phrase "pine bark and wood borers, etc." renders the claims indefinite because the claims include elements not actually disclosed (those encompassed by "etc."), thereby rendering the scope of the claims unascertainable.

8. The term "fine" in independent claims 5 and 10 is a relative term which renders the claims indefinite. The term "fine" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Use of the term fine renders the size of the holes in the porous lumber indefinite.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 5-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Viitaniemi et al. (U.S. Patent 5,685,353).

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Viitaniemi et al. teach a method for compressive shaping of wood (column 1, lines 17-26). The wood is compressed within upper and lower compression plates, i.e. compressing dies (Figure 1 and column 1, lines 49-59). Moreover, Figure 1 illustrates that the ends of the wood are not in contact with the plates and therefore exposed to air. The wood may be coniferous wood, i.e. pine, or it may be deciduous wood compressed to 50% of its initial thickness (column 2, lines 59-63). The compressed wood is also heated while under compression (column 2, lines 25-32). The water content of the finished product is no more than 3% (column 2, lines 25-27).

Since the wood used by Viitaniemi et al. is coniferous, it is taken to have fine holes since it had pine bark.

Regarding the flexural rigidity of claims 6 and 10, from Figure 7 in the instant application it appears that flexural rigidity is a function of water content. Since the water content of Viitaniemi et al. is no more than 3%, it should inherently have a flexural rigidity of 130 MPa or more.

11. Claims 1-3, 5-7, and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Arakawa et al. (U.S. Patent 6,267,920).

Arakawa et al. teach a method of compressing wood such as lumber (column 1, lines 5-22). The wood has a moisture content of as low as 10% (column 4, lines 7-9). The wood may be compressed by roughly 50% (column 2, lines 61-65). In one embodiment, the wood is compressed against a shaping jig (column 4, lines 35-55). This jig reads on a die as claimed. After shaping the wood is cooled to a temperature that is still above ambient temperature and therefore still heated (column 4, lines 56-64). A vinyl monomer, i.e. functional additive, may be

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used to fill cracks and vacancies in the wood (column 6, lines 44-54). In the embodiment of Example 7, the flexural modulus is  $12,300 \text{ N/mm}^2$ , i.e. 12,300 MPa (Table 2). Flexural modulus is taken to be flexural rigidity since modulus is a measure of stiffness.

Regarding the limitations of claim 3, the specific gravity is a function of the degree of compression that the lumber has undergone. Since the lumber of Arakawa et al. has been compressed to the same degree as that of the instant invention, i.e. 50%, it should have the same specific gravity.

### *Claim Rejections - 35 USC § 103*

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viitaniemi et al. (U.S. Patent 5,685,353) in view of Arakawa et al. (U.S. Patent 6,267,920).

Viitaniemi et al. teach all the limitations of claims 1-4 as outlined above, except for the water content of the lumber prior to compressing.

Arakawa et al. is directed to a compressed lumber product (column 1, lines 5-22). Arakawa et al. disclose that compression is difficult unless the water content of the lumber is between 10-80% (column 3, line 66-column 4, line 9).

One of ordinary skill would be motivated to use lumber having a water content as low as 10% as the wood of Viitaniemi et al. because such wood is easier to compress.

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Regarding the limitations of claim 3, the specific gravity is a function of the degree of compression that the lumber has undergone. Since the lumber of Viitaniemi et al. has been compressed to the same degree as that of the instant invention, i.e. 50%, it should have the same specific gravity.

Therefore, the inventions of claims 1-4 would have been obvious to one of ordinary skill in the art at the time the inventions were made.

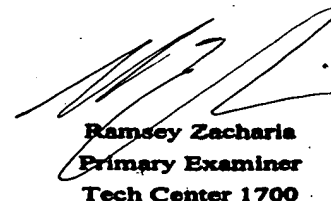
### *Conclusion*

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518.

The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.



**Ramsey Zacharia**  
**Primary Examiner**  
**Tech Center 1700**